

REMARKS

Reconsideration and withdrawal of the rejections of this application and consideration and entry of this paper are respectfully requested in view of the herein remarks, which place the application in condition for allowance.

I. STATUS OF CLAIMS AND FORMAL MATTERS

The applicants appreciate the Examiner's clarification of his position with regard to the emulsion limitation in claim 1 during the telephonic interview of 7 September 2006.

Claims 1,2 and 4-20 are now pending in this application. The limitation of claim 3 has been inserted into claim 1 (claim 3 has been cancelled). New claims 16-20 combine various limitations from the previous claims. It is believed that no new matter has been added. The applicants reserve the right to file a continuing application to further prosecute the scope of the originally filed claims.

[Reference to the specification in this response is made via the page and paragraph numbers from U.S. Patent Application Publication 2004-0198842]

II. THE 35 U.S.C. 112, 1st PARAGRAPH REJECTIONS HAVE BEEN OVERCOME

Claims 1-15 were rejected as allegedly failing to comply with the written description requirement.

The issues of "optionally, at least one auxiliary or additive" (claim 1) and "defoamer emulsion" of claim 11 has been addressed via claim amendments.

With regard to the scope of the defoamer emulsion, given the relatively low standards by which an inventor is deemed to have adequately described their invention, the basis for a lack of written description is unclear.¹

The defoamer emulsions by definition has a "scope" (if there was some reason why one of ordinary skill in the art would not find the scope to be adequately described, it was not articulated or supported by evidence in the rejection). Even if the Examiner's comments

¹ "To satisfy the description requirement of section 112, first paragraph, an application must contain sufficient disclosure, expressly or inherently, to make it clear to one skilled in the art that the appellant was in possession of the subject matter claimed... '[A] statement of the appellant's invention [in his specification] which is as broad as appellant's broadest claims' *is sufficient to meet this requirement*." See *In re Eickmeyer*, 202 USPQ 655, 662 (CCPA 1979)

regarding Defoamers 1-3 were accepted, this still does not show that the applicants did not possess the invention by the applicants as there is no requirement that examples be provided.

However, in the interest of advancing prosecution, the applicants make reference via an IDS the English language equivalent of DE 199 17 186 (U.S. Patent 6,420,324 - Defoamer 1) and EP 658 361 (U.S. Patent 6,001,887 - Defoamer 2) and also provide the product literature for Tego® Antifoam KS 95 (Defoamer 3).

The Examiner appeared to object to the description of Defoamers 1 and 2 for referring to a German language reference. However, these defoamers were known in the art and by themselves do not constitute the applicants' invention, i.e. these defoamers were well known to those of ordinary skill in the art regardless of whether the defoamers were described in English or German.

The Examiner also appeared to object to the description of Defoamer 3 as being "commercial antifoam concentrate based on vegetable oils", however, this is a generic name for the trademarked product and one of ordinary skill in the art would recognize Tego® Antifoam KS 95 as being a defoamer.

III. THE 35 U.S.C. 112, 2nd PARAGRAPH REJECTIONS HAVE BEEN OVERCOME

Claims 1-15 were rejected as allegedly failing to particularly point out and distinctly claim the subject matter which the applicant regards as his invention. Each of these rejections is addressed below:

- (1) The temperature for the viscosity is defined in paragraph [0036] of the specification. In any event, it is well known that it is not necessary that which is well known in the art, i.e. in the absence of temperature designations, room temperature is presumed for viscosity (e.g. the Schulz reference used in the 102/103 rejection below did not specify a temperature for their viscosity).
- (2) This rejection has been rendered moot by the cancellation of the phrase "optionally, at least one auxiliary or additive".
- (3) The aqueous defoamer emulsion and oil-in-water emulsion are distinct emulsions - see explanation below in section IV ("Background for the rejections").
- (4) The definition of R² has been amended to be more in conformance with U.S. practice.
- (5) The limitation of claim 3 has been inserted into claim 1 which now establishes antecedent basis for claims 7-10.

(6) Claim 11 has been amended to recite ---defoamer formulation--- which is consistent with the terminology used in the first line of the claim.

IV. THE 35 U.S.C. 102 and 103 REJECTIONS HAVE BEEN OVERCOME

- (1) Claims 1-5 and 7-15 were rejected as allegedly being anticipated by Dow Corning Toray Silicone Co., Ltd. (EP 761 724 - "Dow Corning").
- (2) Claims 11 and 12 were rejected as allegedly being obvious over Dow Corning Toray Silicone Co., Ltd. (EP 761 724 - "Dow Corning").
- (3) Claims 1-15 were rejected as allegedly being anticipated or in the alternative as allegedly being obvious over Schulz et al. (U.S. Patent 5,811,487 - "Schulz").

Background for the rejections

During the course of the telephonic interview, it appeared that the Dow Corning and Schluz rejections were based a broad interpretation of what could constitute a defoamer and what could constitute the oil-in-water emulsion, i.e. the Examiner presumed that the oil-in-water emulsion could also be the defoamer because of the presence of an organopolysiloxane. However, this position is incorrect.

While it may be possible for an organopolysiloxane *alone* to act as a defoamer, when the organopolysiloxane is part of an oil-in-water emulsion, the *oil-in-water emulsion* does not have any defoaming effect. As an illustration of this, the table on page 3, paragraph [0065] shows that Emulsions 1, 2 and 3 which are encompassed within the scope of the invention, show no antifoaming activity when added to a cooling lubricant when compared against a cooling lubricant which had no defoamer added.

Therefore, the "at least one active defoaming substance" and the "oil-in-water emulsion" of claim 1 are separate and distinct elements of the invention.

(1) Claims are not anticipated by Dow Corning

The applicants agree with the Examiner's contention that organopolysiloxanes alone could act as defoamers. However, the applicants disagree that Dow Corning establishes by inherency that an aqueous defoamer emulsion comprising:

- A) at least one active defoaming substance and, optionally, at least one auxiliary or additive,
- B) an oil-in-water emulsion consisting of at least one organopolysiloxane compound having a viscosity of \geq about $1 \cdot 10^6$ mPas and water would have unexpectedly improved defoaming

effect. There is no evidence which would lead one of ordinary skill in the art to accept that this is an inherent property which follows from a teaching of an organopolysiloxane emulsion.²

First, the applicants have shown in their own specification that organopolysiloxane containing oil-in-water emulsion do not have any defoaming effect which would be consistent with the state of the art taught within Dow Corning, i.e., the broad description of uses of organopolysiloxane emulsions (see col. 1, lines 8-11 of Dow Corning) is conspicuous by the absence of defoaming activity.

Second, while the applicants' oil-in-water emulsion component (B), consists only of at least one organopolysiloxane compound having a viscosity of \geq about $1 \cdot 10^6$ mPas and water, the emulsions of Dow Corning consists of at least three components, i.e. an organopolysiloxane fluid or gum, an emulsifying agent and water.

(2) *Claims are not rendered obvious by Dow Corning*

The arguments presented against anticipation should also be considered repeated here. To the extent that it would have been obvious to one of ordinary skill in the art to add a defoamer to an organopolysiloxane containing oil-in-water emulsion which has no defoaming activity by itself (whether taught by Dow Corning itself or in combination with another reference), the applicants note that the specification has provided evidence of unexpectedly superior results.

Page 3, paragraph [0065] of the specification shows that the defoaming effect of Defoamers 1, 2 and 3 were greatly improved when an organopolysiloxane containing oil-in-water emulsion was added to the Defoamer. Not only was the degree of improvement in defoaming effect surprising, it was surprising that there was ANY effect at all as the organopolysiloxane containing oil-in-water emulsion was shown not to have any defoaming properties.

² MPEP 2112, sec. IV (Requirements of Rejection Based on Inherency; Burden of Proof) states "*The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993).....To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. *Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.*" *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999)(citations omitted)

(3) Claims not anticipated or rendered obvious by Schulz

The reasoning above against anticipation and obviousness set forth above against Dow Corning is also applicable here. In fact, Schulz is even further removed from Dow Corning as there are other differences between their invention and the applicants' claimed invention.

First, Schulz discloses siloxane elastomers which are made by crosslinking reactions of Si—H containing siloxanes and an unsaturated hydrocarbon such as an alpha, omega-diene, in the presence of a low molecular weight siloxane fluid. The siloxane is first partially reacted with a mono-alkenyl functionalized polyether. It is then crosslinked by the alpha, omega-diene, in the presence of the low molecular weight siloxane fluid. These siloxanes are different from the siloxanes used in the applicants oil-in-water emulsion.

Second, Schulz discloses siloxane elastomers which can be swollen with low molecular weight siloxane fluid or other organic fluids under shear force, to provide a uniform *silicone paste* having a viscosity of $> 1 \times 10^6$ mPas, i.e. the paste has the high viscosity, *not the siloxanes* alone as in our invention. For the siloxanes alone, no viscosity has been disclosed. In addition, Schulz does not disclose any particle sizes.

Third, the reliance on inherency to account for missing elements of the anticipation rejection or the Examiner's opinion, instead of evidence from within the prior art, to provide motivation for addressing the differences between Schulz and the applicants' invention is also unfounded because no nexus has been established between Schulz' teachings of a thickening silicones and how they would related to modifying an invention directed toward providing defoaming effects.

CONCLUSION

In view of the remarks and amendments herewith, the application is believed to be in condition for allowance. Favorable reconsideration of the application and prompt issuance of a Notice of Allowance are earnestly solicited. The undersigned looks forward to hearing favorably from the Examiner at an early date, and, the Examiner is invited to telephonically contact the undersigned to advance prosecution. The Commission is authorized to charge any fee occasioned by this paper, or credit any overpayment of such fees, to Deposit Account No. 50-0320.

Respectfully submitted,
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